Gregory C. Gibson

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Education and Professional Experience

2009-present Professor, School of Biology, Georgia Institute of Technology
Human genomics

2008-2009 Australian Professorial Fellow, University of Queensland, Brisbane Australia
Genetics of gene expression variation in humans

2005-2007 William Neal Reynolds Distinguished Professor of Genetics. NC State University
Genomics of gene expression variation in flies, canids and humans

1998-2005 Assistant; Associate (2001) Professor North Carolina State University
Quantitative genomics of morphogenesis and pharmacology in *Drosophila*

1994-1998 Assistant Professor University of Michigan
Quantitative molecular genetics of developmental stability in *Drosophila*.

1993-1994 Post-doctoral Fellow Cathy C. Laurie, Duke University
Evolutionary quantitative genetics of genital morphology in *Drosophila*.

1990-1993 Post-doctoral Fellow David S. Hogness, Stanford University
Population and quantitative genetics of the *Ultrabithorax* gene in *Drosophila*.
Theoretical population genetic modeling (with Marcus W Feldman).

1986-1989 Graduate Student Walter J. Gehring, U. of Basel
Functional dissection of biological specificity of homeotic proteins in *Drosophila*.

HONORS AND AWARDS

2013	Consultant to NICHD
2006	Elected Fellow of the American Association for the Advancement of Science (AAAS)
2005	William Neal Reynolds Distinguished Professor
2002	NCSU Alumni Outstanding Researcher Award
1998	Visiting Research Associate, Stanford University Center for Computational Genetics
1996-2001	David and Lucille Packard Foundation Fellowship in Science and Engineering
1996-1997	Basil O'Connor Young Investigator Award of the March of Dimes
1993-1994	Hargitt Fellow of Duke University Department of Zoology
1990-1993	Helen Hay Whitney Foundation Post-Doctoral Fellow
1989	Doctor of Philosophy, *summa cum laude*, Univ. of Basel, Switzerland
1985	Bachelor of Science, First Class Honors, Univ. of Sydney, Australia

COMMUNITY SERVICE

2013	External Review Committee, Finnish Institute of Molecular Medicine
2013-present	Scientific Advisory Board, Rare Alleles NSF Plant Genome Project, Cornell Univ
2012-2014	Scientific Advisory Board, Dartmouth Institute for Quantitative Biomedical Sciences
2010-present	Chair, Scientific Advisory Board, CARTaGENE Population Genomics, U de Montreal
2007-present	Chair, Scientific Advisory Board, Max Plank Institute for Evolutionary Biology
2006-present	Section Editor: Gene Expression and Natural Variation, *PLoS Genetics*
2005-2007	Associate Director for Education and Outreach, National Evolutionary Synthesis Center
2003-2007	Assistant Director for Life Sciences, North Carolina Agricultural Research Service
2002-2005	North Carolina Governor's Task Force on Genomics and Public Health (Chair 2004, 2005; Futures and Research Group Chair 2003-2005)
2003-2007	Member, FlyBase Advisory Board
2003	Co-author, Drosophila Species White Paper, led to sequencing of 9 new genomes
2002-2003	Executive Director, NCSU CALS Genome Research Laboratory
2002-2007	10 NSF and NIH Scientific Merit Review panels; Christian Doppler Society, Austria
2001-2002	Founding Member, Faculty of the 1000, Online Research Review Service

Editorial Boards:
PLoS Genetics (since 2005)
Genome Medicine (since 2013)
Journal of Personalized Medicine (starting 2015)
Genetics (2004-2010)
American Naturalist (2005-2010)
Current Biology (2003-2009)
Genetical Research (1999-2012; Minireviews Editor 2001-2005)
Genes, Brain, and Behavior (since 2002)
Development, Genes, and Evolution (since 1996)

Ad-hoc Reviewer for: Nature, Nature Genetics, Genetics, Genetical Research, TREE, Journal of Heredity, Current Biology, Development and Evolution, Genome Biology, Genome Research, Molecular Biology and Evolution, PNAS, Science, PLoS Biology, Molecular Ecology

TEACHING (1999 – 2014)

BIOL4545	Human Genetics (5X @ GaTech)
BIOL4803C	Health, Genes and Society (1X @GaTech)
BIOL8802H	Experimental Genomics: Graduate Colloquium (1X @ GaTech)
BIOL8802L	Quantitative Genetics: Graduate Colloquium (1X@GaTech)
GN495G:	Genes, Development, and Evolution: Advanced Undergraduate Course (4X @ NCSU)
GN810G:	Genome Science: Core Graduate Course in Genome Science curriculum (3X @ NCSU)
GN495A:	Introduction to Genome Science: Advanced Undergraduate Course (4X @ NCSU)
GN810E:	Complex Human Disease: Graduate Colloquium (1X @ NCSU)

Summer Institute of Statistical Genetics: "Genome Science" and "Microarray Analysis" Modules
Raleigh 2001, 2002, 2003, 2004; Washington 2006 - 2014
Christchurch NZ, 2001; Dublin Ireland, 2002, Melbourne Australia, 2003;
Faro Portugal, 2004; Seoul Korea, 2005; Aarhus Denmark, 2006; Beijing China, 2010,
Liege Belgium 2007, 2009, 2011, Edinburgh 2012

Doctoral Students:

Dae-gwon Ahn, Ph.D.	1994-1998	Currently Research Assistant Professor, Univ. of Chicago
Arnar Palsson, Ph.D.	1998-2003	Currently Asst Prof, Univ. of Iceland
Roland Carrillo, Ph.D.	1999-2004	Regional representative, DiscoveRx Corporation
Gisele Passador-Gurgel	2000-2006	Currently Teaching Asst. Prof, NCSU
Jennifer Moser	2001-2005	Currently Program Officer, Veterans Affairs
Pierre Bushel	2001-2005	Currently Director of Bioinformatics, NIEHS Durham
Wen-Ping Hsieh	2002-2005	Currently Associate Professor, Tsing Hua Univ. Taiwan
Erin Kennerly	2005-2008	Currently Account Manager, Q^2 Solutions, Durham NC
Youssef Idaghdour	2005-2000	Currently Assistant Professor, NYU Abu Dhabi
Kevin Lee	2011-2014	Currently MD student, UGA
Thanawadee Preeprem	2012-2014	Currently Assistant Professor, Ubon Ratchathani Univ, Thailand
Jing Zhao	2011-2015	Currently Research Scientist, OmicSoft Corp, RTP NC
Monica Rojas	2012-	Current student at GT
Swetha Garimalla	2014-	Current student at GT
Biao Zeng	2014-	Current student at GT
Diana Williams	2014-	Current student at GT

Masters Students (Georgia Tech):

Neha Gupta	2009-2010	Research Bioinformatician, TIGR, Maryland
Arthi Talla	2009-2010	Research Bioinformatician, VGTI, Florida
Ben Hsieh	2009-2011	Research Bioinformatician, UGA
Jinhee Kim	2009-2012	In Chicago
Haozheng Tian	2010-2011	PhD Student, Georgia Tech
Peter Qin	2010-2011	Software developer, Amazon, Seattle WA
Artika Nath	2011-2012	PhD Student, Uni Melbourne
Ambily Sivadas	2011-2012	PhD Student, IGIB Delhi
Seo Young Choi	2011-2012	Accountant
Vartika Agarwal	2012-2013	Research Bioinformatician, Phillips, NY
Karthik Murugesan	2013-2014	Research Bioinformatician, Phillips, NY
Roopa Reddy	2014-2015	Just graduated
Khalid Alhuimidi	2014-	Current student at GT

Post-Doctoral Fellows:

Wei (Wendy) Jin	1999-2000	Currently Director of Plant Epidemiology, APHIS, Raleigh NC
Naruo Nikoh	2001-2003	Currently Associate Professor, Open University of Japan, Chiba
Ian Dworkin	2002-2007	Currently Associate Professor, Michigan State University
Lisa Goering	2003-2007	Currently Associate Professor, St Edwards College, Austin TX
Laura Reed	2006-2010	Currently Assistant Professor, University of Alabama
Yue Luo	2010-2011	Currently Clinical Research Coordinator, Emory University
Rubina Tabassum	2012-2013	Currently Research Scientist, FIMM, Helsinki Finland
Idy Akinsanmi	2014-2015	Currently Clinical Scientist, Alpharetta GA
Yang Tan	2013-	
Urko Martinez	2013-	

GRANTS RECEIVED

1. National Institutes of Health, General Medical Sciences 1-P01GM0996568
   Statistical and Quantitative Genetics – Project 3 Bruce Weir, UWashington, Program Director
   5 years, $225,000 / yr DC to GT 6/12 – 5/17
   Administrative supplement, 2 years, $40,000/yr 3/14 – 2/16

2. National Institutes of Health, General Medical Sciences 1T32GM105490-01
   A computational biology and predictive health genomics training program at GT
   5 years, $280,000 / yr requested 6/14 – 4/19

3. NIAID-DMID-NIHAI2010100 (M. Galinski, Yerkes Primate Center, PI)
   An Integrated Approach to Understanding Host-Pathogen Interactions
   3 years, $300,000/yr DC to GT 7/12 – 12/15

4. Georgia Tech/Emory Immunoengineering Seed Grant (J Galipeau, Emory, Co-PI)
   Molecular genetic and functional characterization of Crohn's MSCs immune plasticity
   1 year, $50,000 7/14 – 6/15

5. Children's Healthcare of Atlanta Pediatric Innovation Center (R Guldberg, Co-PI)
   Toward personalized treatment for Osteochonritis Dissecans based on Genomic Imaging
   1 year $60,000 6/13 – 5/14

6. National Institutes of Health, NICHD Biostatistics and Bioinformatics Branch
   Inter-Personnel Agreement
   12 months, $40,000 5/13 – 4/14

7. Georgia Tech Institute for Bioengineering and Bioscience (IBB)
   Single cell genomic profiling Co-PI with Melissa Kemp, GT
   2 year, $50,000 / yr 7/11 – 6/13

8. Childrens Healthcare of Atlanta Pediatric Medical Device Consortium
   RNA-Seq profiling in support of in-time craniosynostosis intervention (with R. Olivares)
   1 year, $50,000 7/12 – 6/13

9. Children's Healthcare of Atlanta, Center for Cystic Fibrosis Research
   Genome-wide gene expression profiling in CFRD 3/10 - 2/11
   1 year, $50,000 Co-PI with Arlene Stecenko, MD (Emory University)

10. Australian Research Council, Australian Professorial Fellowship DP0880204
    Drosophila Quantitative Genomics
    5 years, AUD $1,015,754 (approx US $900,000) 1/08 – 12/12

11. National Institutes of Health, Heart, Lung and Blood R01HL085481
    Polygenic Basis of Cardiac Dysfunction in *Drosophila.*
    5 years, $1,250,000 total direct costs 1/08- 12/12
    (Co-PI with R. Bodmer, Burham Institute, San Diego)

12a. National Institutes of Health, General Medical Sciences R01GM61600
Quantitative Genetic Analysis of Signal Transduction in *Drosophila.*
4 years, $500,000 total direct costs 10/00 - 9/04

12b. National Institutes of Health, General Medical Sciences 2-R01GM61600
Quantitative Genetic Analysis of Signal Transduction in *Drosophila.*
4 years, $600,000 total direct costs 4/05 - 3/09

13. National Institutes of Health, General Medical Sciences P01-GM45344
Quantitative Pharmacogenomics in Drosophila
5 years, $425,000 total direct costs 12/00 - 11/05

14. National Science Foundation EF-0423641
A National Center for the Synthesis of Biological Evolution
5 years, $15 million; Total Costs to NCSU $1,500,000
(K. Smith, Duke, P.I.; Co-P.I. with J. Kingsolver, T. Vision at UNC)
(last 2 yrs of NCSU portion transferred to B. Wiegmann 11/2007)

15. David and Lucille Packard Foundation for Science and Engineering
Quantitative Developmental and Evolutionary Genetics
5 years, $575,000 total direct costs 10/96 - 9/01

16. NC State Center for Comparative Medicine and Translational Research
Development of an illumina genotyping resource for pharmacogenetics of anti-epileptic response in dogs. 1 year pilot, $15,000 direct costs. 3/06 – 12/06

17. Canine Health Foundation of the American Kennel Club ACORN
Pharmacogenetics of Canine Epilepsy
1 year, $12,000 11/07 – 10/08

18. Canine Health Foundation of the American Kennel Club
Genomics of Canine Brain Neoplasia
2 years, $123,600, total costs 9/04 – 8/06
(M. Breen, NCSU-CVM, P.I.; Co-P.I. with N. Olby, NCSU-CVM)

19. National Institutes of Health, General Medical Sciences R24-GM65513
Quantitative genomics of sexual dimorphism
2 years, $56,000 total direct costs to NCSU 4/02 - 8/03
(with 5 other groups; S. Nuzhdin at UCDavis, P.I.)

20. National Institutes of Health, National Institute of Aging R03
Microarray-based Analysis of Gene Expression in Aging *Drosophila*
1 year, $50,000 total direct costs 9/99 - 8/00

21. North Carolina Affiliate of the American Heart Association
Quantitative Genetic Analysis of Heart Rate in *Drosophila*
2 years, $110,000 total direct costs 5/98 - 4/00

22. March of Dimes Research Foundation, Basil O'Connor Award
Quantitative Genetic Analysis of Developmental Stability
2 years, $80,000 total direct costs 8/96 - 7/98

PUBLISHED RESEARCH AND REVIEW PAPERS

116. Zhao J, Akinsanmi I, Arafat D, Cradick TJ, Lee CM, Banskota S, Marigorta UM, Bao G, Gibson G. (2015) A burden of rare variants associated with extremes of gene expression in human peripheral blood. *Am J Hum Genet.* In press.

115. Gibson G, Marigorta UM, Ojagbeghru ER, Park S. (2015) PART of the WHOLE: A Case Study in Wellness-Oriented Personalized Medicine. *Yale J Biol Med*. **88**: 397-406. PMID: 26604864

114. Tabassum R, Sivadas A, Agrawal V, Tian H, Arafat D, Gibson G. (2015) Omic personality: implications of stable transcript and methylation profiles for personalized medicine. *Genome Med*. **7**:88 PMID: 26391122

113. Wingo AP, Almli LM, Stevens JJ, Klengel T, Uddin M, Li Y, Bustamante AC, Lori A, Koen N, Stein DJ, Smith AK, Aiello A, Koenen K, Wildman D, Galea S, Bradley B, Binder E, Jin P, Gibson G, Ressler KJ. (2015) DICER1 and microRNA regulation in post-traumatic stress disorder with comorbid depression. *Nat Commun*. **6**: 10106. PMID: 26632874

112. Rojas-Peña ML, Vallejo A, Herrera S, Gibson G, Arévalo-Herrera M. (2015) Transcription profiling of malaria-naïve and semi-immune Colombian volunteers in a *Plasmodium vivax* sporozoite challenge. *PLoS Negl Trop Dis*. **9**:e0003978. PMID: 26244760

111. Gibson G, Powell JE, Marigorta UM.(2015) Expression quantitative trait locus analysis for translational medicine. *Genome Med*. 2015 **7**: 60. PMID: 26110023

110. Ingersoll SA, Laval J, Forrest OA, Preininger M, Brown MR, Arafat D, Gibson G, Tangpricha V, Tirouvanziam R. (2015) Mature cystic fibrosis airway neutrophils suppress T cell function: evidence for a role of arginase 1 but not programmed death-ligand 1. *J Immunol*. **194**: 5520-5528. PMID: 25926674

109. Shehata BM, Cundiff CA, Lee K, Sabharwal A, Lalwani MK, Davis AK, Agrawal V, Sivasubbu S, Iannucci GJ, Gibson G. (2015) Exome sequencing of patients with histiocytoid cardiomyopathy reveals a de novo NDUFB11 mutation that plays a role in the pathogenesis of histiocytoid cardiomyopathy. *Am J Med Genet A*. **167**: 2114-2121. PMID: 25921236

108. Chinnadurai R, Copland IB, Ng S, Garcia M, Prasad M, Arafat D, Gibson G, Kugathasan S, Galipeau J. Mesenchymal stromal cells derived From Crohn's patients deploy Indoleamine 2,3-dioxygenase-mediated immune suppression, independent of autophagy. *Mol Ther*. **23**: 1248-1261. PMID: 25899824

107. Tabassum R, Cunningham L, Stephens EH, Sturdivant K, Martin GS, Brigham KL, GibsonG. (2015) A longitudinal study of health improvement in the Atlanta CHDWB wellness cohort. *J Pers Med*. **4**: 489-507. PMID: 25563459

106. Wingo AP, Gibson G. (2015) Blood gene expression profiles suggest altered immune function associated with symptoms of generalized anxiety disorder. *Brain Behav Immun*. **43**: 184-191. PMID: 25300922

105. Lee KJ, Yin W, Arafat D, Tang Y, Uppal K, Tran V, Cabrera-Mora M, Lapp S, Moreno A, Meyer E, DeBarry JD, Pakala S, Nayak V, Kissinger JC, Jones DP, Galinski M, Styczynski MP, Gibson G. (2014) Comparative transcriptomics and metabolomics in a rhesus macaque drug administration study. *Front Cell Dev Biol*. **2**: 54. PMID: 25453034

104. Marigorta UM, Gibson G. (2014) A simulation study of gene-by-environment interactions in GWAS implies ample hidden effects. *Front Genet*. **5**: 225. PMID: 25101110

103. Kippner LE, Kim J, Kemp ML, Gibson G. (2014) Single cell transcriptional analysis reveals novel innate immune cell types. *Peer J.*, **2**: e452. PMID: 25024920

102. Hemani G, Shakhbazov K, Westra HJ, Esko T, Henders AK, McRae AF, Yang J, Gibson G, Martin NG, Metspalu A, Franke L, Montgomery GW, Visscher PM, Powell JE. (2014) Detection and replication of epistasis influencing transcription in humans. *Nature* **508**: 249-253. PMID: 24572353

101. Gibson G. (2014) Wellness and health omics linked to the environment: the WHOLE approach to personalized medicine. *Adv Exp Med Biol*. 799: 1-14. PMID: 24292959

100. Kim J, Ghasemzadeh N, Eapen D, Chung N, Storey JD, Quyyumi AA, Gibson G. (2014) Gene expression profiles associated with acute myocardial infarction and risk of cardiovascular death. *Genome Medicine* **6**:40. PMID: 24971157

99. Rojas-Peña M, Olivares-Navarrete R, Hyzy S, Arafat D, Schwartz Z, Boyan B, Williams J, Gibson G. (2014) Characterization of distinct classes of differential gene expression in osteoblast cultures from non-syndromic craniosynostosis bone. *J. Genomics* **2**: 121-130. PMID: 25184005

98. Preeprem T, Gibson G. (2014b) Preeprem T, Gibson G. (2015a) AACDS: a database for personal genome interpretation. *EMBnet.journal*: e780.

97. Patel C, Sivadas A, Tabassum R, Preeprem T, Zhao J, Arafat D, Chen R, Morgan AA, Martin GS, Brigham KL, Butte AJ, Gibson G. (2013). Whole genome sequencing in support of wellness and health maintenance. *Genome Medicine* **5**: 58. PMID: 23806097

96. Reed LK, Lee K, Zhang Z, Rashid L, Poe A, Hsieh B, Deighton N, Glassbrook N, Bodmer R, Gibson G. (2014) Systems genomics of metabolic phenotypes in wild-type Drosophila melanogaster. *Genetics* **197**: 781-793. PMID: 24671769

95. Preeprem T, Gibson G. (2014) SDS, a structural disruption score for assessment of missense variant deleteriousness. *Front Genet*. **5**:82. PMID: 24795746

94. Zhang Z, Hsieh B, Poe A, Anderson J, Ocorr K, Gibson G, Bodmer R. (2013) Complex genetic architecture of cardiac disease in a wild type inbred strain of Drosophila melanogaster. *PLoS One* **8**: e62909. PMID: 23638165

93. Preeprem T, Gibson G. (2013) An association-adjusted consensus deleterious scheme to classify homozygous Mis-sense mutations for personal genome interpretation. *BioData Min*. **6**: 24. PMID: 24365473

92. Gibson G. (2014) Wellness and health omics linked to the environment: the WHOLE approach to personalized medicine. *Adv Exp Med Biol*. **799**: 1-14. PMID: 24292959

91. Goldinger A, Henders AK, McRae AF, Martin NG, Gibson G, Montgomery GW, Visscher PM, Powell JE. (2013) Genetic and nongenetic variation revealed for the principal components of human gene expression. *Genetics* **195**: 1117-1128. PMID: 24026092

90. Powell JE, Henders AK, McRae AF, Kim J, Hemani G, Martin NG, Dermitzakis ET, Gibson G, Montgomery GW, Visscher PM. (2013) Congruence of additive and non-additive effects on gene expression estimated from pedigree and SNP data. *PLoS Genet*. **9**: e1003502. PMID: 23696747

89. Hussin J, Sinnett D, Casals F, Idaghdour Y, Bruat V, Saillour V, Healy J, Grenier JC, de Malliard T, Busche S, Spinella JF, Larivière M, Gibson G, Andersson A, Holmfeldt L, Ma J, Wei L, Zhang J, Andelfinger G, Downing JR, Mullighan CG, Awadalla P. (2013) Rare allelic forms of PRDM9 associated with childhood leukemogenesis. *Genome Res*. **23**: 419-430. PMID: 23222848

88. Preininger M, Arafat D, Kim J, Nath AP, Idaghour YI, Brigham KL, Gibson G. (2013). Blood informative transcripts define nine common axes of peripheral blood gene expression. *PLOS Genetics*, **9**: e1003362. PMID: 23516379

87. Zhao J, Arafat D, Kim J, Gibson G. (2013) Genetic risk prediction in a small cohort of healthy adults in Atlanta. *Genet Res*. (*Camb.*) **95**: 30-37. PMID: 23442331

86. Nath AP, Arafat D, Gibson G. (2012) Using blood informative transcripts in geographical genomics: impact of lifestyle on gene expression in Fijians. *Front Genet*. **3**:243. PMID: 23162571

85. Qin SP, Kim J, Arafat D, & Gibson G. (2012) Effect of normalization on statistical and biological interpretation of gene expression profiles. *Front. Genet.* **3**:160. PMID: 23755061

84. Gibson G. (2012) Rare and common variants: twenty arguments. *Nat Rev Genet*. **13**: 135-145. PMID: 22251874

83. Claes P, Walters M, Shriver MD, Puts D, Gibson G, Clement J, Baynam G, Verbeke G, Vandermeulen D, Suetens P. (2012) Sexual dimorphism in multiple aspects of 3D facial symmetry and asymmetry defined by spatially-dense geometric morphometrics. *J Anatomy* **221**: 97-114

82. Al-Attas O, Al-Daghri N, Alokail M, Alkharfy K, Alfadda A, McTernan P, Gibson G, Sabico S, Chrousos G. (2012) Circulating leukocyte telomere length is highly heritable among families of Arab descent. *BMC Med Genet*. **13**: 38. PMID: 22606980

81. Krauss-Etschmann S, et al. (2012) Of flies, mice and men: a systematic approach to understanding the early life origins of chronic lung disease. *Thorax*. ePub ahead of print. PMID 22781122

80. Al Daghri N, al Attas OS, Alokail MS, Alkharfy KM, Yakout SM, Sabico SM, Gibson G, Chrousos GP, Kumar S. (2011) Parent-offspring transmission of adipocytokine levels and their associations with metabolic traits. *PLoS ONE*, **6**(**4**): e18182. PMID: 21483749

79. Dworkin I, Anderson JB, Idaghdour Y, Parker EK, Stone EA, Gibson G. (2011) The effects of weak genetic perturbations on the transcriptome of the wing imaginal disc, and its association with wing shape in Drosophila melanogaster. *Genetics* **187**: 1171-1184. PMID: 21288875

78. Mason E, Tronc G, Nones K, Matigian N, Kim J, Aronow BJ, Wolfinger RD, Wells C, Gibson G. (2010) Maternal influences on the transmission of leukocyte gene expression profiles in population samples from Brisbane, Australia. *PLoS One* **5(12)**: e14479.

77. Reed LK, Williams S, Springston M, Brown J, Freeman K, DesRoches CE, Sokolowski MB, Gibson G. (2010) Genotype-by-diet interactions drive metabolic phenotype variation in Drosophila melanogaster. *Genetics* **185**: 1009-1019.

76. Cirulli ET, Kasperaviciūte D, Attix DK, Need AC, Ge D, Gibson G, Goldstein DB. (2010) Common genetic variation and performance on standardized cognitive tests. *Eur J Hum Genet.* **18**: 815-820.

75. KimJ, & Gibson G. (2010) Insights from GWAS into the quantitative genetics of transcription in humans. *Genet Research* **92**: 361-369.

74. Gibson G. (2010) Hints of hidden heritability in GWAS. *Nat Genet.* **42**: 558-560.

73. Eichler EE, Flint J, Gibson G, Kong A, Leal SM, Moore JH, Nadeau JH. (2010) Missing heritability and strategies for finding the underlying causes of complex disease. *Nat Rev Genetics.* **11**: 446-450.

72. Gibson G. (2009) Decanalization and the origin of complex disease. *Nat Rev Genetics* **10**: 134-140.

71. Idaghdour Y, Czika W, Shianna K, Lee H, Visscher PM, Martin H, Miclaus K, Jadallah S, Goldstein DB, Wolfinger RD & Gibson G. (2009) Geographical genomics of human leukocyte gene expression variation in Southern Morocco. *Nature Genetics* **42**: 62-67.

70. Goering LM, Hunt P, Heighington C, Busick C, Pennings P, Hermisson J, Kumar S & Gibson G. (2009) Association of *orthodenticle* with natural variation for early embryonic patterning in *Drosophila melanogaster*. *J Exp Zool B. Mol Dev Evol* **312B**: 841-854.

69. Kennerly EM, Idaghdour Y, Olby N, Munana K & Gibson G. (2009) Pharmacogenetic association study of 30 genes with phenobarbital drug response in epileptic dogs. *Pharmacogenet Genom* **19**: 911-922.

68. Need AC, Attix D, McEvoy J, Cirulli E, Linney K, Hunt P, Ge D, Heinzen E, Maia J, Shianna KV, Weale ME, Cherkas L, Clement G, Spector TD, Gibson G, & Goldstein DB. (2009) A genome-wide study of common SNPs and CNVs in cognitive performance in the CANTAB. *Hum. Mol. Genet.* **18**: 4650-4651.

67. McGraw LA, Gibson G, Clark AG & Wolfner MF. (2009) Strain-dependent differences in several reproductive traits are not accompanied by early postmating transcriptome changes in female *Drosophila melanogaster*. *Genetics* **181**: 1273-1280.

66. Dworkin IM, Kennerly E, Tack D, Hutchinson J, Brown J, Mahaffey J & Gibson G. (2009) Genomic consequences of background effects on *scalloped* mutant expressivity in the wing of *Drosophila melanogaster*. *Genetics* **181**: 1065-1076.

65. Manolio TA, *et al*. (2009) Finding the missing heritability of complex diseases. *Nature* **461**: 747-753.

64. Idaghdour Y, Storey JD, Jadallah S, & Gibson G. (2008) A gene expression signature of environmental geography in peripheral blood of Moroccan Amazigh. *PLoS Genetics* **4**: e1000052

63. Kennerly EM, Acton A, Martin S, Gregory S, Wolfinger R, Stoskopf M and Gibson G. (2008) A gene expression signature of stress in peripheral blood of captive and free-ranging red wolves (*Canis rufus*). *Molecular Ecology* **17**: 2782-2791

62. Gibson G. (2008) The environmental contribution to gene expression variation. *Nat Rev Genetics* **9**: 575-581.

61. Gibson G, & Reed LK. (2008) Cryptic Genetic Variation: A Primer *Curr. Biol.* **18**: R989-R990.

60. Gibson G, & Goldstein DB. (2007) Human genetics: the hidden text of genome-wide associations. *Curr Biol*. **17**: R929-R932.

59. Passador-Gurgel G, Hsieh W-P, Hunt PK, Deighton N, & Gibson G. (2007) Quantitative trait transcripts for nicotine resistance in *Drosophila melanogaster*. *Nature Genetics* **39**: 264-268

58. Ocorr KA, Crawley T, Gibson G, & Bodmer R. (2007) Genetic variation for cardiac dysfunction in Drosophila. *PLoS ONE* **2**: e601

57. Hsieh WP, Passador-Gurgel G, Stone EA & Gibson G. (2007) Mixture modeling of transcript abundance classes in natural populations. *Genome Biol*. **8(6)**: R98

56. Moser JM, Carbone I, Arasu P, and Gibson G. (2007) Genetic variation and population structure at *asp-1* and *cox-1* of the canine hookworm, *Ancylostoma caninum*. *J. Parasitol*., **93**: 796-805

55. Need AC, Attix D, McEvoy J, Cirulli E, Linney K, Wagoner AP, Gumbs C, Giegling I, Möller HJ, Francks C, Muglia P, Roses A, Gibson G, Weale ME, Rujescu D & Goldstein DB. (2008) Failure to replicate effect of Kibra on human memory in two large cohorts of European origin. *Neuropsychiatric Genetics* **147B**: 667-668

54. Bushel PR, Wolfinger RD & Gibson G. (2007) Simultaneous clustering of gene expression data with clinical chemistry and pathological evaluations reveals phenotypic prototypes. *BMC Syst Biol*. **1**: 15.

53. Dworkin ID & Gibson G. (2006) Epidermal Growth Factor Receptor and Transforming Growth Factor-β Signaling Contributes to Variation for Wing Shape in *Drosophila melanogaster*. *Genetics*, **173**: 1417-1431.

52. Ayroles JF & Gibson G. (2006) Analysis of Variance of Microarray Data. *Methods Enzymol*. **411**: 214-233.

51. Palsson A, Dodgson J, Dworkin I & Gibson G. (2005) Tests for the replication of an association between Egfr and natural variation in Drosophila melanogaster wing morphology. *BMC Genet*. **6**: 44.

50. Dworkin I, Palsson A, & Gibson G. (2005) Replication of an Egfr-wing shape association in a wild-caught cohort of *Drosophila melanogaster*. *Genetics* **169**: 2115-2125.

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